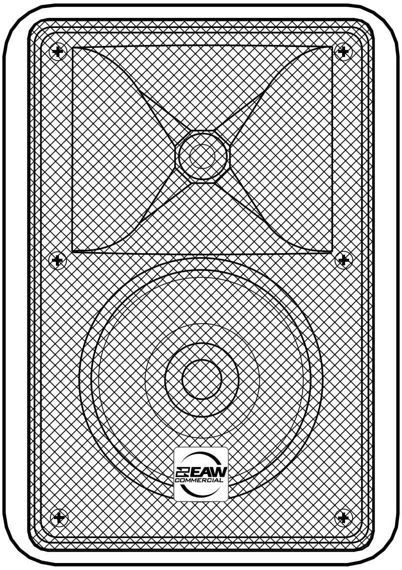
INSTRUCTION MANUAL

SMS3

Compact Two-Way Loudspeaker



1. SAFETY INSTRUCTIONS

1.1. Read Instructions — Before connecting and using the equipment, please read this Instruction Manual carefully and keep it for future reference.

1.2. HEED ALL WARNINGS — Always follow the precautions provided on this EAW Commercial product and in the instruction manual.

1.3. Water and Humidity — Do not use this EAW Commercial product near water; for example, in the vicinity of a bath tub or sink, in a damp cellar, near a swimming pool, etc.

1.4. Foreign Bodies and Liquids — Be careful not to allow any foreign bodies or liquids to get into this EAW Commercial product.

1.5. Servicing — The user should never attempt to make any repairs on this EAW Commercial product unless otherwise indicated in the instruction manual. All repairs should be made by qualified service technicians.

1.6. Installation — Do not install this EAW Commercial product in any way that is not provided for in the instruction manual.

1.7. Respect the Safety Standards — The entire sound system must be designed in compliance with the current standards and laws regarding electrical systems.

1.8. Specifications — When installing and using this EAW Commercial product, keep in mind the technical specifications indicated in the dedicated section of the manual.

1.9. Accessories — Install and use this EAW Commercial product only with the accessories specified by the manufacturer or supplied with the product.

1.10. Hearing Loss — Exposure to high sound levels can cause permanent hearing loss. The sound pressure level which leads to hearing loss varies considerably from one person to another, and depends on the duration of exposure. The U.S. Government's Occupational Safety and Health Administration (OSHA) has established the maximum sound pressure levels that can be with stood without causing damage, which are shown in the table below. According to the OSHA regulations, any exposure over the maximum limits indicated in the table can reduce the hearing capacity of a person. To prevent potentially dangerous exposure to high sound pressure levels, anyone subjected to such levels must use suitable protection. When a EAW Commercial product capable of producing high sound levels is being used, it is therefore necessary to wear ear plugs or protective earphones when the limits shown in the table are exceeded.

Consult the specifications provided in the instruction manual to know the maximum sound pressure (SPL) the speaker is capable of producing.

WARNING! This equipment has been designed to be installed by qualified professionals only! There are many factors to be considered when installing professional sound reinforcement systems, including mechanical and electrical considerations, as well as acoustic coverage and performance. EAW Commercial strongly recommends that this equipment be installed only by a professional sound installer or contractor.

Duration per day (hours)	Sound level (dBA)	Typical example
8	90	Duo in a small club
6	92	
4	95	Subway train
3	97	
2	100	Very loud classical music
1.5	102	
1	105	Locomotive at 50 feet
0.5	110	
0.25 or less	115	Loudest parts at a rock concert

Part No. 0010158 Rev. C 08/04

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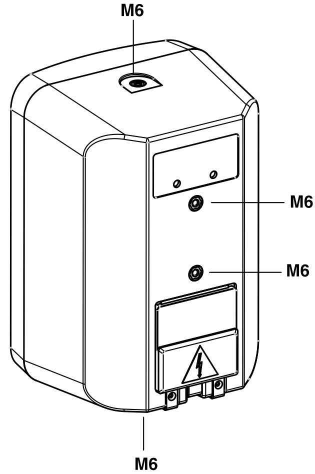
2. KEY FEATURES

- 4.75" high-efficiency carbon fiber woofer
- 0.5" mylar dome tweeter loaded by a 110° x 100° constant directivity horn
- Built-in, multi-tap constant voltage transformer
- Built-in, low-inductance passive crossover
- Lightweight, UV/weather resistant, high density polystyrene, trapezoidal shaped enclosure for multiple applications and minimum visual intrusion
- Integrated mounting points for use with optional mounting hardware
- Articulated surface mount hardware included

3. INTRODUCTION

The SMS3 and SMS3W are a compact two-way loudspeaker system designed for constant-voltage. The 4.75” (120 mm) carbon fiber woofer, in combination with a 0.5” (13 mm) mylar dome tweeter mounted on a 110° x 100° constant directivity horn, provide natural, smooth sound reproduction, ideal for use in business music systems and indoor/outdoor background music applications. The passive crossover is designed to reduce heat dissipation and optimize the power response of the loudspeaker. Connections are made to recessed, color-coded spring-loaded terminals. The enclosure is constructed of high-density plastic, with M6 threaded inserts for use with the optional mounting hardware, and includes a protective perforated steel grille.

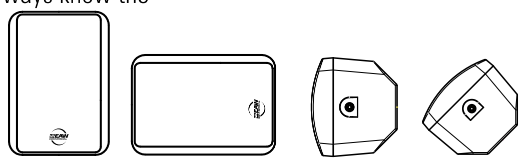
4. INSTALLATION



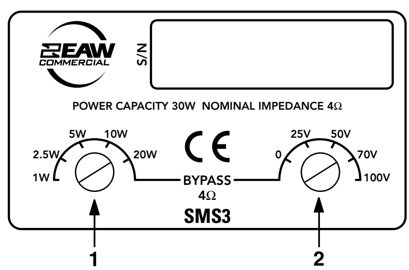
The special hexagonal shape of the cabinet makes it possible to position the speaker in various ways, as shown in the figure. The logo plate on the front protective grille can be rotated to adapt it to the position of the speaker. The speaker body has four M6 threaded inserts, one each on the top and bottom and two on the back, used for attaching accessories for installing the speaker in different ways.

SMS3 (SMS3W) speakers are supplied with a black (white) ball joint support for wall mounting.

WARNING: Consult a professional rigger or structural engineer prior to suspending loudspeakers from a structure not intended for that use. Always know the working load limit of the structure supporting the loudspeaker array. Always make sure that the rigging hardware minimum rating is at least five times the actual load.



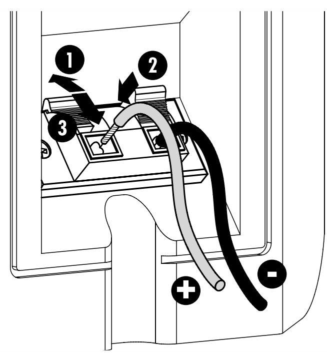
5. REAR PANEL FEATURES AND CONTROLS



1. This rotary control selects the power tap for the internal constant voltage transformer. Choices are 1W, 2.5W, 5W, 10W, 20W, and BYPASS (used for 4 ohm operation).
2. This rotary control selects the constant voltage distributed system in which the speaker is used. Choices are BYPASS (used for 4 ohm operation), 0 (Off), 25V, 50V, 70V and 100V.

Note: Use a slot-head screwdriver to adjust the rotary controls.

6. CONNECTIONS



The spring-loaded speaker terminals are designed to accept bare wire, up to a maximum of 18 gauge. Strip 1/4'' (6 mm) of insulation off the end of the speaker wire, press in the tab, and insert the bare wire into the hole. When you release the tab, the wire is locked in place. Make sure there are no stray strands of wire outside the terminal connection.

WARNING: To prevent the risk of electrical shock, always fit the protective cover over the terminals after completing the connections.

7. SPECIFICATIONS

SYSTEM

Freq. Range (–10 dB):	100 Hz–20 kHz
Freq. Response (–3 dB):	150 Hz–20 kHz
Horz. Coverage Angle (–6 dB):	100° averaged 800 Hz to 16 kHz
Vert. Coverage Angle (–6 dB):	110° averaged 800 Hz to 16 kHz
System Sensitivity[1]:	88 dB, 1W @ 1m
Rated Maximum SPL:	105 dB, @ 1m
System Nominal Impedance:	4Ω (bypassed)
System Input Power Rating[2]	
Applicable Power:	30W rms (bypassed)
Musical Power:	60W rms (0.5 sec ON, 0.5 sec OFF, bypassed)
Peak Power:	90W rms (30W rms + 4.5 dB crest factor, bypassed)
Constant Voltage:	25V, 50V, 70V, 100V
Power Taps:	1W, 2.5W, 5W, 10W, 20W
Crossover:	3.0 kHz

TRANSDUCERS

Low-Frequency:	4.75 in/120 mm carbon fiber woofer
High-Frequency:	0.5 in/13 mm mylar dome tweeter

PHYSICAL

Enclosure:	45° back angles, high density polystyrene
Attachment Inserts:	Four points M6 threaded, two on back, one on top, and one on bottom
Mounting Hardware:	Wall-mount ball-joint support bracket
Color:	Matte black (SMS3) or white (SMS3W), scratch resistant paint
Grille:	Matching perforated steel grille
Input Connectors:	Spring-loaded terminals
Dimensions (HxWxD):	8.50 in/216 mm x 6.06 in/154 mm x 5.35 in/136 mm
Net Weight:	4.9 lb/2.2 kg

1) Measured on axis in the far field with 1 watt (2.00 V rms @ 4 ohms) input and referenced to 1 meter distance using the inverse square law. Listed sound pressure represents an average from 300 Hz to 3 kHz.

2) The specifications provide three power values, which are determined by submitting the speaker to a series of laboratory tests lasting two hours each. In the test for Applicable Power, pink noise is applied in the operating range of the speaker, and the signal is filtered at the ends of the band with a 12 dB/octave slope. The applicable power value indicated is an rms value. The signal peaks present in the pink noise, adjusted according to the type of speaker being tested (e.g., +4.5 dB with respect to the average level), are used for determining the Peak Power value. To identify the Musical Power, the rms power value obtained in the first test is doubled, applying it with impulses lasting 0.5 seconds (0.5 sec ON), and at an interval of 0.5 second between one application and the next (0.5 sec OFF). For all the tests, the maximum power that the speaker can withstand without sustaining permanent damage is assumed as the power value.

Disclaimer

EAW Commercial continually engages in research related to product improvement, new materials, and production methods. Design refinements are introduced into existing products without notice as a routine expression of that philosophy. For this reason, any current EAW Commercial product may differ in some respect from its published description, but will always equal or exceed the original design specifications unless otherwise stated.

8. SERVICE INFORMATION

In the event that your SMS3 or SMS3W should require servicing, please follow these instructions:

1. Call EAW Commercial Tech Support at 1-888-337-7404, 7 am to 5 pm PST (Monday-Friday), to verify the problem and obtain a Return Authorization (RA) Number. Be sure to have the serial number of the unit when you call. You must have a Return Authorization Number in order to obtain warranty service at the factory or at an authorized service center. You can also email EAW Commercial Tech Support at: support@eawcommercial.com
2. Pack the unit in its original packaging. THIS IS VERY IMPORTANT. EAW Commercial is not responsible for any damage that occurs during shipping due to non-conventional packaging. Original packaging helps to minimize the possibility of shipping damage.
3. Include a legible note stating your name, (no P.O. boxes), daytime phone number, Return Authorization Number, and a detailed description of the problem, including how we can duplicate it.
4. Write the Return Authorization Number in BIG BOLD PRINT on the top of the box.
5. Tech Support will tell you where to ship the unit when you call for an RA Number. We suggest insurance for all forms of cartage.

9. WARRANTY

Warranty: LOUD Technologies Inc. requires its authorized EAW Commercial distributors to abide by the following warranty terms for all EAW Commercial brand products (all dates are from the date of delivery from an Authorized EAW Commercial Distributor to the end user/installation site): Loudspeakers – 5 years; Active Electronics – 5 years; Accessories – 2 years.

What Is Covered: Defects in workmanship and materials and against malfunctions. EAW Commercial distributors must remedy all such defects and malfunctions without charge for parts or labor if the warranty applies. Final determination of warranty coverage lies solely with each authorized EAW Commercial distributor.

What Is Not Covered: This warranty does not extend to damage or malfunctions resulting from, but not limited to, shipment, improper installation, misuse, neglect, abuse, normal wear, accident, or to any product on which the serial number has been modified or removed. Exterior defects in or damage to the exterior appearance are specifically excluded from this warranty. EAW Commercial distributors shall not be liable for incidental or consequential damages resulting from the use of EAW Commercial products. Repairs and/or modifications by other than an Authorized EAW Commercial Distributor automatically voids this warranty.

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